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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,339	08/26/2003	Jung-Tao Liu	29250-001071/US	3513

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HARNESS, DICKEY & PIERCE, P.L.C.  
P.O Box 8910  
Reston, VA 20195

EXAMINER
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ADDY, THJUAN KNOWLIN

ART UNIT	PAPER NUMBER
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2614

MAIL DATE	DELIVERY MODE
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05/29/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/647,339	<b>Applicant(s)</b> LIU, JUNG-TAO	
	<b>Examiner</b> THJUAN K. ADDY	<b>Art Unit</b> 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment filed on May 06, 2009 has been entered. No claims have been amended. No claims have been cancelled. Claim 21 has been added. Claims 1-21 are now pending in this application, with claims 1, 9, and 20 being independent.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/06/09 has been entered.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kadaba et al. (US Patent Application, Pub. No.: US 2002/0172217 A1), in view of  
Emeott et al. (US 5,721,732).

4. In regards to claims 1, 9, and 20, Kadaba discloses a method and control channel for transmitting control signals in a communication network (See pg. 2, paragraph [0012]), comprising: transmitting only control signal data related to scheduling for uplink transmission of packet data over a single control channel (e.g., Forward Uplink Scheduling Channel {F-USCH} or shared data channel), the single control channel having physical structure and data arrangement therein corresponding to the control signal data transmitted on the single control channel (See pg. 2, paragraph [0012] and pg. 4, paragraph [0035]). Kadaba, however, does not disclose the physical structure of the control channel and the data arrangement in the control channel being selecting based on a user transmission mode. Emeott, however, does disclose the physical structure of the control channel (e.g., dedicated control channel/transmission channel) and the data arrangement in the control channel being selecting based on a user transmission mode (e.g., first transmission mode or second transmission mode) (See col. 3 lines 43-52, col. 6 lines 22-28, and col. 7-8 lines 65-13).

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Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate this feature within the method, as a way of providing a communication device having multiple transmission modes that enables transmitting user information and associated control procedure (ACP) information that permits reliable recovery of the user information in the presence of substantial channel errors, while maintaining the existing rate of transmission of ACP information.

5. In regards to claim 2, Kadaba discloses the method, wherein the control channel carries different control signal data based on the transmission mode (See pg. 1-2, paragraph [0011] and pg. 5, paragraph [0051]).

6. In regards to claim 3, Kadaba discloses the method, wherein transmitting control signal data further includes transmitting one or more of medium access control buffer status data, transport format data, transport block size data and redundancy data, if the transmission mode is a scheduled transmission mode (See pg. 1-2, paragraph [0011]; pg. 2, paragraph [0025]; and pg. 4, paragraph [0035]).

7. In regards to claims 4 and 12, Kadaba discloses the method and control channel, wherein the scheduling mode specifies that users transmit on the uplink, start times for the user and duration of uplink transmission (See pg. 4, paragraph [0035]).

8. In regards to claims 5 and 13, Kadaba discloses the method and control channel, wherein transmitting control signal data further includes transmitting one or more of, transport format data, transport block size data, HARQ channel ID data and an indicator indicating whether data carried on a corresponding data channel is a new packet or a

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re-transmission of a previous packet, if the transmission mode is a rate-controlled transmission mode (See pg. 5, paragraph [0052] and pg. 6, paragraph [0061]).

9. In regards to claims 6 and 14, Kadaba discloses the method and control channel, wherein the rate-controlled mode specifies an allowed data rate for a user, the user transmitting autonomously, subject to the allowed data rate (See pg. 3, paragraph [0030]; pg. 5, paragraph [0051]; and pg. 8, paragraph [0088]).

10. In regards to claims 7, 11, and 15, Kadaba discloses the method and control channel, wherein transmitting control signal data further includes transmitting one or more of medium access control (MAC) buffer status data, pilot transmit power data and data related to priority of a packet in the MAC buffer, if a user is configured in a reporting mode (See pg. 3, paragraph [0029] and pg. 4, paragraph [0035]).

11. In regards to claims 8 and 16, Kadaba discloses the method, and control channel wherein the user transmits the control channel in the reporting mode when the user is neither scheduled for uplink transmission nor transmitting autonomously while subject to an allowed data rate for uplink transmission (See pg. 5, paragraph [0051] and pg. 6, paragraph [0061]).

12. In regards to claim 10, Kadaba discloses the control channel, wherein the sub-frame is comprised of a plurality of slots, each slot containing a plurality of fields of control information that differs based on the transmission mode of the user (See pg. 1-2, paragraph [0011] and pg. 5, paragraph [0051]).

13. In regards to claim 17, Kadaba discloses the control channel, wherein the user is in a reporting mode if there is no companion data on the uplink, in a rate-controlled

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transmission mode if there is no associated downlink transmission grant message received from a base station, and in a scheduling mode if there is an associated downlink transmission grant message received from the base station (See pg. 1-2, paragraph [0011] and pg. 2, paragraph [0025]).

14. In regards to claim 18, Kadaba discloses the control channel, wherein the at least one sub-frame has a 2 ms transmission time interval (See pg. 3, paragraph [0031] and pg. 4, paragraph [0034]).

15. In regards to claim 19, Kadaba discloses the control channel, wherein the at least one sub-frame has a transmission time interval adapted to be changed based on a desired control channel design, and wherein the number of fields within a given slot of the sub-frame remains constant for any given transmission time interval (See pg. 3, paragraph [0031] and pg. 4, paragraph [0034]).

16. In regards to claim 21, Kadaba discloses all of claim 21 limitations, except the control channel, wherein, the single control channel is a dedicated control channel, the at least one sub-frame includes at least one time slot, and the physical structure for each transmission mode includes a number of bits, the number of bits being the same for each transmission mode. Emeott, however, does disclose the control channel, wherein, the single control channel is a dedicated control channel (See col. 3 lines 43-50), the at least one sub-frame includes at least one time slot (See col. 3 lines 29-57 and col. 6 lines 22-28), and the physical structure for each transmission mode includes a number of bits, the number of bits being the same for each transmission mode (See col. 7 lines 11-25).

***Response to Arguments***

17. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to THJUAN K. ADDY whose telephone number is (571)272-7486. The examiner can normally be reached on Mon-Fri 8:30-5:00pm.

19. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on (571) 272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thjuan K. Addy/  
Primary Examiner, Art Unit 2614

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